



Seaweed based food ingredients to inhibit lipid oxidation in fish-oil-enriched mayonnaise

Hermund, Ditte Baun; Jonsdottir, Rosa; Kristinsson, Hordur; Jacobsen, Charlotte

Publication date:
2014

Document Version
Version created as part of publication process; publisher's layout; not normally made publicly available

[Link back to DTU Orbit](#)

Citation (APA):
Hermund, D. B., Jonsdottir, R., Kristinsson, H., & Jacobsen, C. (2014). *Seaweed based food ingredients to inhibit lipid oxidation in fish-oil-enriched mayonnaise*. Abstract from 12th Euro Fed Lipid Congress, Montpellier, France.

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Seaweed based food ingredients to inhibit lipid oxidation in fish-oil-enriched mayonnaise

D.B. Larsen¹, Rosa Jónsdóttir ², Hordur G. Kristinsson³, C. Jacobsen¹

¹Division of Industrial Food Research, Lipids and Oxidation Group, National Food Institute, Technical University of Denmark, Søtofts Plads, Building 221, DK-2800 Kgs, Lyngby, Denmark

²Marinox ehf., Háeyri 1, IS-550 Sauðárkrókur, Iceland

³ Matís, Vínlandsleid 12, IS-113 Reykjavík, Iceland

Natural antioxidants derived from marine algae have a high content of bioactive components with potential for improving oxidative stability of lipids in food systems. In this presentation I will discuss results from our ongoing work on the brown algae *Fucus vesiculosus*. This seaweed contains a wide range of polyphenols with potential antioxidant activity. Thus, *in vitro* antioxidant properties of *F. vesiculosus* extracts have been found to be related to the total phlorotannin content. Phlorotannins is a dominant polyphenolic compound. However, studies on the effectiveness of seaweed extracts in food systems are sparse. Therefore there is a need to look further into this area.

A storage experiment was performed where four different extracts from *F. vesiculosus* were added to fish oil enriched mayonnaise in 2 different concentrations (1.5 and 2 g/kg mayonnaise). At 7 time points (day 0, 3, 7, 10, 13, 21 and 28) samples were taken and analysed. Lipid oxidation during storage was followed by determination of peroxide value, tocopherol content, fatty acid composition and development of secondary oxidation products. Results from this study will be presented.